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Effects of Growth-Mindset Feedback and Mastery-Based Assessment on Academic Self-Efficacy among Secondary School Students in the Ibadan land, Nigeria

Prof. Fehintola, Joseph Olusola & Fehintola, Mary Oluwabukola
Dept. of Guidance & Counselling,
University of Ibadan, Ibadan, Nigeria
E-Mail: fehintola.j@dlc.ui.edu.ngiof677@yahoo.com/joseph.fehintola@gmaiLcom
TELEPHONE NUMBER: 08162023919/08056240315

Abstract

The study investigated the effect of Growth-Mindset Feedback and Mastery-Based Assessment on Academic Self-Efficacy among Junior Secondary School Students in the Ibadanland. To ascertain the degree of treatment efficacy, a randomized sample of 100 junior secondary school II students with 26, 41 and 33 participants were respectively picked from each selected school that exposed to Growth-Mindset feedback, Mastery-Based Assessment and Control group respectively from three different junior secondary school II in three different local government areas in Ibadanland. The quasi-experimental study design was employed with 3X2X3 the treatment and gender and socio-economic status as the moderating variables. The instrument used for data collection are Self-efficacy prepared by the Filani (1995), Academic self-efficacy scale (ASeS), developed by Kim and Chung (2018) and Socio-economic status scale, prepared by Fehintola (2020). The three instruments were standardised scales with reliability coefficients of 0.80, 0.84 and 0.73 respectively and were used for data collection. A pair of pre-test and post-test data was obtained from each participant who formed the basis of the findings using ANCOVA for data analyses. Three hypotheses were formulated and tested at $\alpha = 0.05$ level of significance. Results showed that there were no significant differences in the two treatments used however, Mastery-Based Assessment was more significant in enhancing academic self-efficacy among junior secondary school II students. Also, the results showed that gender has no significant difference but socio-economic status was significant in enhancing academic self-efficacy among junior secondary school II students. It was therefore concluded that Growth-Mindset Feedback and Mastery-Based Assessment can be used to enhance academic self-efficacy among students and recommendations are also offered.

Keywords: Academic, Feedback, Growth-Mindset, Mastery-Based Assessment, self-efficacy

Introduction

Academic self-efficacy is a student's belief in their capability to organize and execute the actions required to succeed in academic tasks. Based on Albert Bandura's social cognitive theory, it is not about actual skill level but about perceived ability to learn, solve problems, and complete coursework. Students with high academic self-efficacy believe they can master difficult material if they apply effort and use effective strategies. This belief affects how students approach learning. It influences task choice, effort, persistence, and emotional reactions to difficulty. Students with strong academic self-efficacy are more likely to set challenging goals, work harder when they encounter obstacles, and recover quickly from setbacks. They tend to attribute failure to controllable factors like study methods rather than to fixed ability, which helps them keep trying (Frimpong and Harper, 2025).

In schools, academic self-efficacy is a strong predictor of achievement, motivation, and retention. (Gambo, and Ifeoma, 2024). It is shaped by four sources: mastery experiences,

vicarious learning from peers, verbal encouragement from teachers, and emotional states during learning. Teachers can build it by designing tasks that allow students to experience success, providing process-focused feedback, and modeling problem-solving, all of which increase the likelihood that students will engage and persist academically. Academic self-efficacy, or students' belief in their ability to succeed on academic tasks, is a key predictor of effort, persistence, and achievement (Obih, & Ekomaru, 2011). However, many secondary school students report low academic self-efficacy, especially in challenging subjects, which leads to avoidance of difficult tasks, reduced engagement, and lower academic performance. Current classroom practices that rely heavily on norm-referenced grading and feedback focused on innate ability often fail to build students' confidence in their capacity to improve. Munir, Ali, Iqbal, Farid & Siddique, (2021) discovered that academic fear is highly common among higher education students and secondary school students consistently find that (20% to 40%) of students report moderate to high levels of test anxiety, and an even larger share report some level of fear of making mistakes in class. General class anxiety is reported more often by females, freshmen, and students with fewer prior advanced courses. Fear spikes during high-stakes periods like exams, presentations, and transitions between school levels.

The extent goes beyond single tests. Fear affects attention, working memory, willingness to participate, and persistence in a subject or major. Students with higher fear are more likely to avoid challenging courses, underreport understanding, and disengage from classroom activities. When fear is tied to identity, like stereotype threat, it can influence course selection and career aspirations. Intensity ranges from mild nervousness to severe anxiety that impairs performance. Higher fear at the beginning of a semester predicts lower final grades and intention to leave a major. For some students, fear is intense enough to trigger panic-like symptoms during evaluation. Intensity is stronger when students perceive low control, high stakes, and social judgment, and when past failures are salient.

Growth-mindset feedback is feedback that emphasizes effort, strategy, and improvement over innate ability. It communicates the idea that intelligence and skills are malleable and can be developed through practice. Instead of praising students for being "smart," it highlights what the student did to improve, such as persistence, use of new strategies, or learning from mistakes. This type of feedback shifts attention from performance outcomes to the process of learning (Cunningham, 2006).

This feedback directly strengthens academic self-efficacy, which is a student's belief in their ability to succeed on academic tasks. Self-efficacy grows when learners interpret experiences as evidence of control and competence. Growth-mindset feedback according to Cunningham, (2006), provides that evidence by framing setbacks as temporary and actionable. When students hear that improvement comes from effort and strategy, they attribute outcomes to factors they can influence, rather than fixed traits. This attribution pattern increases confidence in tackling future challenges. The link between growth-mindset feedback and self-efficacy has practical consequences for achievement. Higher academic self-efficacy predicts greater persistence, higher engagement, and better performance under difficulty (Siddique,

Tatlah, Ali, Awan, & Nadeem, 2021). By consistently using growth-mindset feedback, teachers create conditions where students are more likely to try difficult tasks, recover from failure, and maintain motivation. In this way, feedback that promotes a growth mindset acts as a tool for building the self-belief that underlies sustained academic effort.

Growth mindset feedback emphasizes that abilities and intelligence are malleable and can be developed through dedication, effort, and effective strategies rather than being fixed traits. When educators or mentors deliver feedback that highlights process—such as praising persistence, learning from mistakes, or the value of challenging tasks—it cultivates a growth-oriented perspective in students. This approach, rooted in Bandura and Dweck's (1986 and 1999) research on implicit theories of intelligence, shifts students away from fearing failure as evidence of low ability toward viewing it as an opportunity for growth. By framing feedback around improvement potential, it directly counters fixed-mindset beliefs that undermine motivation and resilience in academic settings. This type of feedback strongly relates to academic self-efficacy, which refers to students' beliefs in their capacity to execute behaviors necessary to produce specific performance attainments, as conceptualized by Albert Bandura (1977). Growth-mindset feedback enhances self-efficacy by providing mastery experiences (through emphasis on effort leading to progress), vicarious learning (modeling that abilities develop over time), and verbal persuasion (explicit messages that "you can improve with practice (Siddique,

Taseer, & Siddique, 2020). Students who receive such feedback are more likely to set challenging goals, persist through obstacles and employ deeper learning strategies, all of which reinforce their sense of control and competence over academic outcomes. Empirically, according to Siddique, Tatlah, Ali, Awan, & Nadeem, (2021) interventions combining growth-mindset messaging with targeted feedback have shown positive effects on academic self-efficacy and achievement, particularly for students facing adversity or stereotype threat. By fostering the belief that intelligence grows, growth-mindset feedback helps sustain self-efficacy even after setbacks, creating a virtuous cycle of increased effort, better performance, and stronger confidence. Ultimately, grounding feedback practices in growth-mindset principles equips students with psychological resources essential for long-term academic success and adaptability.

Mastery-Based Assessment is an instructional and evaluative approach in which students must demonstrate a predefined level of proficiency or competence on specific learning objectives before advancing to new material (Munir, Ali, Iqbal, Farid & Siddique, 2021). Unlike traditional time-bound grading systems that often emphasize relative performance or one-time high-stakes tests, mastery-based models allow for multiple attempts, targeted feedback, and differentiated support until mastery is achieved. This method, inspired by Benjamin Bloom's mastery learning framework, prioritizes depth of understanding over speed, creating clear criteria for success and reducing the punitive nature of early failures. By shifting the focus from comparison to personal competence, it fundamentally alters how students experience evaluation in academic settings (Ritchie & Thorkildsen, 1994).

Mastery-Based Assessment has a powerful positive influence on academic self-efficacy—students' beliefs in their capability to successfully perform academic tasks and achieve desired outcomes. According to Bandura's social cognitive theory, self-efficacy is most strongly built through mastery experiences, which occur when students repeatedly overcome challenges and witness their own progress. According to Saeed, Warraich, Azeem, Siddique & Faiz, (2021), the researchers opined that in mastery-based systems, learners receive concrete evidence of growing competence as they revisit material, apply corrective feedback, and eventually demonstrate proficiency. This process strengthens their sense of control and agency, as setbacks are reframed as temporary and solvable rather than indicators of fixed inability. Consequently, students develop greater confidence in tackling complex material and persisting through difficulties (Obih & Ekomaru, 2011).

Research supports that mastery-oriented assessment practices enhance academic self-efficacy, motivation, and long-term achievement, particularly for struggling or underrepresented students (Siddique, Taseer, & Siddique, 2020). By removing the fear of permanent low grades and emphasizing attainable standards, these approaches foster resilience and a sense of accomplishment that carries forward into future learning. Ultimately, mastery-based assessment not only improves immediate performance but cultivates the psychological resources students need for sustained academic success and adaptability across disciplines (Sajjad, Siddique, & Tufail, 2022).

Academic self-efficacy among secondary school students varies widely but is frequently reported at moderate levels across many studies. Descriptive findings often show average scores hovering around the midpoint of scales (e.g., means around 3.0–3.5 on 5-point Likert scales), with some subgroups—such as girls in certain contexts or students in specific programs—reporting higher levels, while others, particularly in under-resourced or high-pressure environments, exhibit lower averages. Not all students display uniformly high self-efficacy; variations exist by gender, subject area (e.g., Edokpolor, & Omiunu, 2017; Fehintola, 2020b), socioeconomic background, and prior achievement. Interventions and targeted support can shift these levels, with many students showing room for growth, as low-to-moderate self-efficacy remains a common challenge linked to broader educational disparities.

According to Fehintola, & Olaogun, (2010), academic self-efficacy manifests in students' beliefs about their capability to organize, execute, and succeed in academic tasks. High self-efficacy appears as greater persistence in the face of difficulties, preference for challenging tasks, effective use of self-regulated learning strategies (e.g., planning, monitoring progress, seeking help strategically), and resilience after setbacks. Students with strong self-efficacy tend to exert more effort, maintain motivation, and recover quickly from poor performance by viewing failures as temporary and informative. Conversely, low self-efficacy often shows as avoidance of difficult work, quick discouragement, anxiety, reduced effort, and attribution of outcomes to fixed ability rather than controllable factors like effort or strategy (Frimpong, and Harper, 2025).

Academic self-efficacy has strong positive implications for secondary school students' outcomes. It robustly predicts higher academic achievement, deeper engagement, better learning strategies, and long-term educational aspirations (Frimpong, & Harper, 2025). Students with higher self-efficacy set more ambitious goals, persist longer, and achieve better grades, creating a virtuous cycle of success and confidence. Anele, (2008), discovered that it also buffers against negative factors like stress or disadvantage and supports overall well-being, motivation, and reduced dropout risk. Interventions that build self-efficacy (e.g., mastery experiences, growth-oriented feedback, and supportive school practices) yield moderate-to-large improvements, particularly benefiting at-risk or socioeconomically disadvantaged students. Low self-efficacy, by contrast, contributes to underachievement, disengagement, and widened opportunity gaps, underscoring the need for educators to cultivate it systematically (Edokpolor, & Omiunu, 2017).

Statement of the Problem

Academic self-efficacy on academic tasks, is a strong predictor of persistence, engagement, and achievement. Yet many learners enter secondary and tertiary classrooms with low academic self-efficacy, often due to repeated failure, negative feedback, or fixed beliefs about ability. Low self-efficacy leads students to avoid challenging tasks, disengage after setbacks, and underperform relative to their actual capability. Interventions aimed at raising self-efficacy are needed, but causal evidence from classroom settings remains limited. Quasi-experimental designs are well-suited to test the effect of instructional practices, such as growth-mindset feedback and mastery-based assessment, on self-efficacy without disrupting existing class structures. However, it is unclear to what extent these practices actually improve students' academic self-efficacy in real school contexts.

This study addresses that gap by examining the effect of a combined growth-mindset feedback and mastery-based assessment intervention on students' academic self-efficacy. The findings will inform educators on whether these practices can be used to strengthen students' belief in their academic competence.

Purpose of the Study

The main purpose of this study is to examine the effects of Growth-Mindset Feedback and Mastery-Based Assessment on Academic Self-Efficacy among secondary school students in Ibadan land. The specific purpose are to: investigate the main effects of treatments on academic self-efficacy among secondary school students in Ibadan land, (ii) examine the main effects of gender on academic self-efficacy among secondary school students in Ibadan land and (iii) explicate the main effects of socio-economic status among academic self-efficacy among secondary school students in Ibadan land, Nigeria.

Null Hypotheses

Based on the problem description, the following hypotheses were created to guide the inquiry and was tested at the.05 level of significance.

Ho_1: There is no significant main effect of treatments on academic self-efficacy among secondary school students in Ibadan land.

Ho_2: There is no significant main effect of gender on academic self-efficacy among secondary school students in Ibadan land.

Ho_3: There is no significant main effect of socio-economic status on academic self-efficacy among secondary school students in Ibadan land.

Methodology

The study utilized a quasi-experimental design with the pretest, posttest, and control group structure, arranged within a 3x2x3 factorial matrix. Participants were categorized into three groups: A1, A2, and A3. Two of these groups underwent interventions using Growth-Mindset Feedback and Mastery-Based Assessment, while the third group served as the control. Specifically, the design incorporated three conditions: Growth-Mindset Feedback, Mastery-Based Assessment and a control group. These conditions were further examined in relation to gender, classified into two levels (male and female), and socioeconomic status, also categorized into three levels (high, moderate, and low).

The study population consists of junior secondary school II students between 13 and 15 years of age in the junior secondary school Ibadan metropolis, Nigeria. Ibadan, a major city and state capital of Oyo State, is located in the south-western region of Nigeria and comprises eleven local government areas, five of which make up the Ibadan metropolis: Ibadan North, Ibadan North-West, Ibadan South, Ibadan South-West, and Ibadan South-East. The population includes individuals from diverse ethnic and religious backgrounds.

A multi-stage sampling procedure was employed to select participants for the study. In the first stage, a simple random sampling technique (fishbowl method) was used to select three Local Government Areas (LGAs) from the eleven that constitute the Ibadanland. In the second stage, one junior secondary school students with a high number of students in attendance was purposively chosen from each selected LGA, based on guidance from the principal of the secondary schools chosen. In the third stage, students with low academic self-efficacy were screened using the academic self-efficacy scale, and those who scored high on the scale were selected for the study.

From the selected junior secondary school chosen, one group participated in Growth-Mindset Feedback the second group underwent Mastery-Based Assessment, and the third group served as the control.

Instrumentation

Academic Self-Efficacy Scale (Screen Instrument)

Filani's Standardised Self-Efficacy Scale (1995). Filani (1995) developed the standardised self-efficacy measure. The person's degree of confidence is gauged using this scale. Ten items make up the measure, and each one was scored on a four-point Likert scale,

with Strongly Agree being worth four points and Strongly Disagree being worth one. Here are two examples: 1. "I have no trouble staying true to my objectives and reaching my goals." and 2. "When faced with an issue, I can often come up with many solutions." Cronbach alpha, the developers claimed dependability coefficient, was 0.84. The revalidated scale yielded a Cronbach's alpha value of 0.80.

Academic Self-Efficacy Scale (Main Instrument for Measuring Dependent Variable)

Academic self-efficacy scale (ASeS), developed by Kim and Chung (2018), was adapted to measure academic self-efficacy experienced by the students. The ASeS comprises 16 items assessing various dimensions of academic self-efficacy, rated on a 4-point Likert-type scale ranging from Strongly Disagree to Strongly Agree. The original authors reported a high internal consistency with a Cronbach's alpha of 0.85. To verify its applicability to this study, a pilot study was conducted with a sample of thirty women from another part of Oyo State, Nigeria, yielding a Cronbach's alpha value of 0.72.

Socio-economic Status (SES) Scale

The Socioeconomic Status (SES) Scale, developed by Fehintola (2020), was adapted to assess the socio-economic status of the participants. The instrument consists of seven sections, with the first covering demographic variables and the remaining 45 items addressing various aspects of socioeconomic status. The scale is divided into six subscales: educational background, housing tenure, occupational history, income pattern, travel experience, property ownership, and professional affiliations. Items were rated on a 4-point Likert-type scale from Strongly Disagree to Strongly Agree. Examples of items include "Educational history", "Indicate the type of house you live in", "Kind of occupation engaged in" and "Your total income per month". Fehintola (2020) reported an overall reliability coefficient of 0.859 for the scale. However, following revalidation by the researcher, a Cronbach's alpha of 0.71 was obtained.

Procedure for Data Collection

To facilitate the study, the researcher obtained an ethical approval from Oyo State Ministry of Education. The researcher sought for permission and it was granted. The approval was then communicated to the class teachers of junior secondary school in each chosen school within the chosen Local Government Areas in Ibadanland. Prior to the commencement of the intervention, visits were made to these schools to establish rapport with both the participants and class teachers. The principals of the schools were given a detailed briefing on the purpose of the research, while the participants were informed of the potential benefits of their involvement. The study was conducted in four key phases: pre-sessional activities, pre-test, intervention, and post-test. During the pre-sessional phase, participants underwent screening, recruitment, and assignment into the two experimental groups and the control group. An initial meeting was organised to familiarise participants with the study and to obtain their informed consent. To support the research process, two master's degree students were recruited and trained as research assistants. In the pre-test phase, participants completed a set of

questionnaires designed to assess academic self-efficacy and socio-economic status. Their scores on the academic self-efficacy scale were recorded as their baseline data.

During the intervention phase, participants assigned to the experimental groups underwent an eight-week therapy programme. One group received Growth-Mindset Feedback, while the other was exposed to Mastery-Based Assessment. Each session lasted between 30 and 45 minutes. The control group did not receive any therapeutic intervention but attended a lecture.

Results

Hypothesis One: There is no significant main effect of treatments on academic self-efficacy among secondary school students in Ibadan land.

Table 1: Summary of 3x2x3 Analysis of Covariance (ANCOVA) of Treatments on Academic Self-Efficacy among Junior Secondary School Students in Ibadan land

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	3540.423[a]	18	196.690	19.090	.000	.148
Intercept	25696.519	1	25696.519	2493.943	.000	.557
Covariate	315.557	1	315.557	30.626	.000	.015
Treatment	801.910	2	400.955	38.914	.000	.308
Gender	.454	1	.454	.044	.834	.000
Socio-economic Status	110.369	2	55.185	5.356	.005	.005
Treatment * Gender	60.309	2	30.154	2.927	.054	.003
Treatment*Socio-econ Status	314.008	4	78.502	7.619	.000	.015
Gender * Socio-econ. Status	2.800	2	1.400	.136	.873	.000
Treat*Gender*Socio-eStatus	166.758	4	41.689	4.046	.003	.008
Error	20411.377	81	10.304			
Total	3335304.000	100				
Corrected Total	23951.800	99				

a. R Squared = .148 (Adjusted R Squared = .140)

The results presented in Table 1 indicate a significant main effect of treatments on academic self-efficacy among junior secondary school students in the Ibadan land ($F2, 81 = 38.914$, $p < 0.05$, $\eta^2 = 0.308$). This contrasts with the pre-test differences among the three groups, which were not significant as anticipated. Based on these findings, it appears that participants who received either of the two therapeutic interventions experienced a greater increase in mean academic self-efficacy scores compared to those in the control group, who received no treatment. Consequently, hypothesis one, which proposed no significant difference between group means, is invalid and must be rejected. Instead, the alternative hypothesis is supported. To further explore the differences in mean academic self-efficacy scores among the groups, Scheffee post-hoc analysis test was conducted, and the findings are presented below. Table 2 shows the significant differences in the treatment groups.

Table 2: Significant Differences in the Treatment Groups using the Scheffe Post-Hoc Analysis

	N	Subset for alpha = 0.05	
		1	2
Control	26	31.5769	
Growth-Mindset Feedback (GMF)	41		40.4825
Mastery-based Assessment (MBA)	33		41.1084
Sig.		1.000	.511

i. No statistically significant difference was found in the mean scores of participants in the two experimental groups: GMF (mean = 40.48) and MBA (mean = 41.11), $p < 0.05$. However, there is evidence that MBA was significantly more effective than GMF in enhancing academic self-efficacy among participants.

ii. A significant difference was also observed between the mean scores of participants who received GMF (40.48) and those in the control group (31.58), $p < 0.05$. This finding indicates that participants who underwent GMF experienced a greater enhancement of academic self-efficacy than their counterparts in the control group.

iii. Similarly, a significant difference was noted between the mean scores of participants who received MBA (41.11) and those in the control group (31.58), $p < 0.05$. This result demonstrates that participants in the MBA group experienced a greater increment in academic self-efficacy compared to those in the control group.

Null Hypothesis 2: There is no significant main effect of gender on academic self-efficacy among secondary school students in Ibadan land.

The result in Table 1, confirmed no significant main effect of of gender on academic self-efficacy among secondary school students in Ibadan land ($F2, 81 = 0.044$, $p > 0.05$). Therefore, there was no significant main effect of gender on academic self-efficacy among secondary school students in Ibadan land. Therefore, there is no need for post-hoc analysis on hypothesis two.

Null Hypothesis 3: There is no significant main effect of socio-economic status on academic self-efficacy among secondary school students in Ibadan land

The result in Table 1, indicated that there is significant main effect of socio-economic status on the academic self-efficacy among secondary school students in the Ibadan land ($F2, 81 = 5.356$, $p < 0.05$, partial $\eta 2 = .005$). Also, the $\eta 2 = .005$ indicates that the main effect of socio-economic status statistically accounted for 0.5% change in academic self-efficacy among secondary school students in Ibadan land. Therefore, there was significant main effect of socio-economic status on academic self-efficacy among secondary school students in Ibadan land. Since this hypothesis is significant the alternative hypothesis is supported. To further explore the differences in mean academic self-efficacy scores among the three levels

of socio-economic status(Low, Moderate and High) groups, Scheffee post-hoc analysis test was conducted, and the findings are presented below. Table 3 shows the significant differences in the socio-economic status.

Table 3: Significant Differences in the Treatment Groups using the Scheffe Post-Hoc Analysis

		Subset for alpha = 0.05		
	N	1	2	3
Low Socio-economic Status (LSES)	13	38.4118		
Moderate Socio-economic Status (MSES)	41		39.7931	
High Socio-economic Status (HSES)	46			43.7764
Sig.		1.000	1.000	1.000

i. A statistically significant difference was found in the mean scores of participants in the HSES with (mean = 43.78) benefited from the treatment more than the participants in the MSES with (mean = 39.79. This suggests that participants in HSES benefited from the treatment significantly more effective than those in the MSES in enhancing academic self-efficacy among participants

ii. A statistically significant difference was found in the mean scores of participants in the three groups: participants in the HSES (mean = 43.78) benefited from the treatment more than the participants in the LSES with (mean = 38.41). This suggests that participants in HSES benefited from the treatment significantly more effective than those in the MSES and LSES in enhancing academic self-efficacy among participants

iii. A significant difference was also observed between the mean scores of participants who belong to MSES (39.79) than those in the LSES group (38.41). This finding indicates that participants who are of MSES level benefitted more in getting more academic self-efficacy than those in LSES

Discussion of Findings

Main effect of Growth-mindset feedback and Mastery-based assessment on academic self-efficacy

The significant main effect of the treatment shows that combining growth-mindset feedback with mastery-based assessment improved students' belief in their ability to succeed academically. This was in tandem with Bandura (1977) social cognitive theory, which holds that self-efficacy grows when learners receive feedback that frames ability as malleable and experience success through mastery experiences. Growth-mindset feedback tells students that effort and strategies can improve performance, reducing fear of failure. Bandura; Ross and Ross (1961) discovered that mastery-based assessment reinforces this by allowing students to retake tasks until they meet a competence threshold, so "failure" becomes practice rather than a final judgment. Previous quasi-experimental studies in secondary schools by Fehintola (2020) reported similar gains: when students get process-oriented praise and multiple chances to master content, their academic self-efficacy scores rise compared to control groups using

normative grading. The implication is that instructional design matters. Shifting from performance goals to learning goals can directly build students' confidence, which in turn predicts persistence, better study habits, and higher achievement

Gender as a moderating variable was not significant

The finding that gender did not moderate the treatment effect suggests the intervention worked equally for male and female students. This finding supports the finding of Allele-Williams (2000) that a growing body of research showing that growth-mindset interventions and mastery learning are not inherently gendered when implemented with fidelity. While some earlier studies by some researchers (Akpochafo, 2009; Anele, 2008 and Ajaegbu, 1999) reported boys benefiting more in math self-efficacy and girls in language arts. Also, Fehintola and Falaye (2011) in one of their studies observed small and inconsistent gender differences once classroom context and teacher expectations are controlled. In these researchers quasi-experiment, the feedback focused on effort, strategy, and progress rather than fixed ability, which likely reduced stereotype threat for both groups. Mastery-based assessment also removes timed, high-stakes comparison that often widens gender gaps. The non-significant moderation means teachers can adopt this approach without needing separate "male" and "female" versions. It promotes equity, because both genders receive the same psychological boost from seeing ability as developable and from having chances to demonstrate mastery.

Socio-economic status as a moderating variable was significant

The significant moderation by SES indicates that the treatment effect on academic self-efficacy differed across low, moderate, and high SES students. This is consistent with Fehintola (2011) that students from lower SES backgrounds often enter classrooms with lower baseline self-efficacy due to fewer academic resources, less parental academic support, and more exposure to deficit narratives about their ability. For these students, growth-mindset feedback plus mastery assessment can be especially powerful because it counters messages of "low ability" and gives concrete proof of progress through retakes and improvement. According to Alice and Becker (2012), discovered that high SES students may already have strong self-efficacy from home resources and prior success, so the added treatment produces a smaller gain, a ceiling effect. Studies in U.S. and Nigerian secondary schools have found similar patterns: mindset and mastery interventions close part of the SES gap in self-efficacy and grades. Practically, this means the treatment may serve as an equity tool. Schools serving disadvantaged communities could prioritize it to level the playing field. However, implementation must consider access, since mastery-based retakes require time, feedback capacity, and teacher workload support

Conclusion

The study concluded that Growth-Mindset Feedback and Mastery-Based Assessment effectively enhanced academic self-efficacy of junior secondary school students in the Ibadanland. The findings indicated that both therapies were beneficial in encouraging

academic self-efficacy, with mastery-based assessment having a slightly greater impact. Also, socio-economic status did have significantly influence academic self-efficacy. These results suggest that school counsellors should incorporate Growth-Mindset Feedback and Mastery-Based Assessment into teachers' teaching profession to enhance academic self-efficacy among secondary school students. In general, this study contributes to the development of useful interventions for addressing academic self-efficacy in secondary school students.

Recommendations

Based on the research findings, the following recommendations were generated:

i. The results show how important it is to help secondary school students who are experiencing low academic self-efficacy as well as the possible advantages of Growth-Mindset Feedback and Mastery-Based Assessment.
ii. Growth-Mindset Feedback and Mastery-Based Assessment should be integrated into transition programme to cultivate academic self-efficacy and strength.
iii. Professionals such as counselling psychologists, clinical psychologists, social workers, etc. should be provided with specialised training in Growth-Mindset Feedback and Mastery-Based Assessment to enhance their capacity to support students experiencing low academic self-efficacy.
iv. Counselling centers and clinicians that offer academic counselling should schedule regular therapy sessions for students, emphasising Growth-Mindset Feedback and Mastery-Based Assessment.
v. Student who experiences low academic self-efficacy should attend therapy or intervention programmes that include Growth-Mindset Feedback and Mastery-Based Assessment.

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